

REMARKS

Claims 1-31 are pending. Claims 1-5, 7-9, 11-17, 19-23, 25-29 and 31 stand rejected under 35 U.S.C. 102(b) as being anticipated by Kroll (1) (US 5861006). In addition, claims 6, 10, 18, 24 and 30 stand rejected under 35 U.S.C. 103(a) as being obvious over Kroll(1) in view of Kroll(2) (US 5899923). Applicants respectfully traverse.

Pending claim 1 is directed to a method for estimating a deformation factor including “measuring a second charge interval associated with charging the one or more capacitors to the second energy level; and generating a deformation factor as a ratio of the second charge interval to the ideal charge time.” As the Examiner is well aware, in order for a reference to anticipate a claim, that reference must teach each element of the properly construed claim. Contrary to the Examiner’s assertion, Kroll(1) fails to teach, among other things, “generating a deformation factor as a ratio of the second charge interval to the ideal charge time.”

Kroll(1) teaches computing an estimated full charge time according to the equation $(V^2_{\text{max}}/V^2_{\text{test}})T_{\text{TEST}}$ where T_{TEST} is the time to charge to a minimum voltage. The Examiner asserts that “Kroll further teaches that when the maximum charge time is reached, the software program compares T_{TEST} to the most recent charge time”. Applicant respectfully traverses. Kroll(1) states “Hereafter, when the maximum charge voltage is reached in block 58, the software program proceeds to decision block 64 where the estimated T_{TEST} is compared against *a set time limit* “ (emphasis added, col. 5, lines 35-37). Therefore, Kroll(1) does not teach or suggest comparing T_{TEST} to a most recent charge time.

The Applicant further submits that inconsistencies in the disclosure of Kroll make the description confusing and indefinite. Applicants therefore traverse the Examiner’s conclusion as to what the Kroll reference discloses, as even a person skilled in the art could not effectively interpret Figure 6 in light of the written description. For example, Block 58 in Figure 6 states “charge to 100V”, which is indicated as a minimum voltage (col. 5, line 29), in contrast to the written description which states “when the maximum charge voltage is reached in block 58” (col. 5, line 34). Furthermore, the definition of

T_{TEST} is ambiguous. Kroll defines T_{TEST} as an estimated overall charge time (col 5, lines 31-32) and later defines T_{TEST} as the test voltage charge time required for the 100 V_{TEST} (col. 5, lines 60-61). This ambiguity makes it unclear and confusing, even to a skilled artisan, what comparison is being made at block 64, which is shown in the figure to be " $Is T_{TEST} > T_L$ " and is described in the written description as "where the estimated T_{TEST} is compared to a set time limit". Accordingly, the applicant respectfully submits that the disclosure of Kroll fails to teach or render obvious "generating a deformation factor as a ratio of the second charge interval to the ideal charge time" as stated in the pending claims. The Kroll(2) '923 reference fails to remedy this deficiency. Applicant respectfully submits that the rejection is improper and should be withdrawn.

Applicant notes the assertion by the Examiner that "it is inherent that charging the capacitor to a maximum voltage is also associated with a second energy level." Applicant respectfully traverses. The energy level will also depend on the rate of current flow during charging. Charging to a different voltage may result in the same energy level since the current rate may be different.

Applicant respectfully asserts that the present claims are in condition for allowance. Withdrawal of the instant rejections and issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date

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